

In re Application of: Arie ARIAV
Serial No.: 10/522,769
Filed: January 31, 2005
Office Action Mailing Date: April 30, 2008

Examiner: Vijay B. CHAWAN
Group Art Unit: 2626
Attorney Docket: 29181

REMARKS

In response to the Office Action mailed April 30, 2008, favorable reconsideration of the application is respectfully requested in the light of the following remarks.

In the above Office Action, all the pending claims, namely original claims 1–20, were rejected under 35 U.S.C. §102(b) as being anticipated by Tzirkel–Hancock (US Patent No. 5,960,395).

In the rejection of claim 1, the Examiner paraphrased all the recitations in present claim 1 and referred to various passages in the reference as anticipating those recitations. The main passages referred to by the Examiner are those in Column 10, lines 6–15, and in Column 38, line 28 to Column 41, line 59. These passages have been carefully reviewed, but are not seen to disclose or even remotely suggest the invention of the present application as defined in claim 1.

Thus, claim 1 recites, among other features:

(a) a filter system connected to receive the electrical outputs of the microphone and to produce for each voice command a first output corresponding to the high–frequency component of the voice command, and a second output corresponding to the low–frequency component of the voice command; and

(b) a processor for processing the first and second outputs of the filter system and for outputting, for each voice command:

(i) a first electrical signal when the low–frequency component precedes the high–frequency component in the respective voice command, and

(ii) a second electrical when the high–frequency component precedes the low–frequency component in the respective voice command.

It will thus be seen that the system defined in claim 1 is (a) “frequency dependent” in that it analyzes the frequency of the respective command to produce one output for the high–frequency component, and a second output for the low–frequency component; and (b) also “sequence–dependent”, in that it determines the command by examining the sequence in which the above two outputs are produced.

This is to be sharply contrasted with the much more complicated system of the cited reference, which is neither “frequency dependent”, nor “sequence–dependent”.

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Rather, it is (a) time-dependent, and (b) model dependent. Thus, as clear from the passages referred to by the Examiner, that in the cited reference “a frame is extracted once every 10 milliseconds” (column 7, lines 28–29), “the magnitude of the discrete Fourier transform (DFT) of the frame is calculated” (column 7, lines 57–59), and the output signals “are compared with stored reference models which model the words already known to the system and the acoustic environment surrounding the system” (column 10, lines 19–21).

The system of the cited reference is, therefore, considerably more complicated than the simple system of the present invention as defined in claim 1, since the referenced system, not only divides the command into time frames, determines a particular characteristic of each time frame, produces a “model” of each frame, and updates that model, in order to identify the particular command. In the invention of the present application, however, all that is necessary is to filter the signal of the respective spoken command, produce a high-frequency component and a low-frequency component of the respective command, and compare which component precedes the other.

It is submitted, that claim 1 is clearly allowable over the cited reference under 35 U.S.C. §102(b), as well as under 35 U.S.C. §103.

Claims 2–7 all dependent from claim 1, and are therefore submitted to be allowable with that claim, apart from the further features set forth in the respective dependent claims.

Claim 8 is drawn as a separate independent claim, but is submitted to be allowable for the same reasons as discussed above with respect to independent claim 1.

Claims 9–14 all depend from claim 8, and are therefore submitted to be allowable with that claim apart from the further features set forth in the respective dependent claims.

Independent claim 15 is drawn to the same features of independent claim 1, except that independent claim 15 is drafted as a method claim, rather than a system claim. However, the same remarks set forth above with respect to claim 1 for distinguishing over the cited reference apply with equal force with respect to claim 15, and it is submitted therefore that claim 15 is also allowable.

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The remaining claims 16–20 all depend from claim 15, and are therefore submitted to be allowable with that claim, apart from the further features set forth in the respective dependent claims.

In view of the foregoing, it is believed this application is now in condition for allowance, and an early Notice of Allowance is respectfully requested.

Respectfully submitted,

A handwritten signature in cursive script, reading "Martin D. Moynihan".

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